

TKN Macro-Kjeldahl Digestion and Distillation SM 18 th Ed. 4500-N _{org} B					Page 1 of 2
Facility Name: _____ VELAP ID _____					
Assessor Name: _____ Analyst Name: _____ Inspection Date _____					
Relevant Aspect of Standards	Method Reference	Y	N	N/A	Comments
Records Examined: SOP Number/ Revision/ Date _____ Analyst: _____					
Sample ID: _____ Date of Sample Preparation: _____ Date of Analysis: _____					
Are sample volumes selected according to the expected organic nitrogen in samples? (0-1 mg/L= 500 mL sample, 1-10 mg/L=250 mL sample, 10-20 mg/L=100 mL sample, 20-50 mg/L=50 mL sample, and 50-100 mg/L=25 mL sample.)	4500-N _{org} B.4.a				
Is ammonia removal performed by adding 25 mL borate buffer, then adding 6N sodium hydroxide until pH 9.5, and then boiling? (Not required if ammonia is separately determined and subtracted from final results.)	4500-N _{org} B.4.b				
Are wet portions of sludge or sediment samples used for kjeldahl nitrogen determination? (Do not dry before taking an aliquot.)	4500-N _{org} B.4.b				
For Digestion:					
Is digestion solution prepared using 134g K ₂ SO ₄ + 200 mL conc. H ₂ SO ₄ + 25 mL HgSO ₄ solution, diluted to 1 liter with deionized water, and is 50 mL digestion solution added to each sample? Alternatively, is 10 mL H ₂ SO ₄ + 6.7g K ₂ SO ₄ + 1.25 mL HgSO ₄ solution added to each sample? <i>Copper may be substituted for mercury by adding 10 mL of a solution containing 25.115 g CuSO₄/L to each sample in addition to the 50 mL digestion solution from which HgO is omitted.</i>	4500-N _{org} B.3.b, 4500-N _{org} B.4.c				
Are boiling beads or chips added to each flask, and is each one mixed?	4500-N _{org} B.4.c				
Are samples boiled briskly until volume is greatly reduced and copious white fumes are observed?	4500-N _{org} B.4.c				
After fumes are observed, are samples digested for an additional 30 minutes?	4500-N _{org} B.4.c				
Following digestion, are samples cooled, diluted to 300 mL with deionized water, and mixed?	4500-N _{org} B.4.c				
Notes/Comments					

**Ammonia Nitrogen by Semi-Automated Colorimetry
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For Distillation:					
Is 50 mL hydroxide-thiosulfate reagent added to each sample, and is the flask mixed by shaking?	4500-N _{org} B.4.c				
Are samples distilled with the vertical condenser's outlet tip submerged below the surface of the receiving acid solution?	4500-N _{org} B.2.b, 4500-NH ₃ B.2.a				
Is 200 mL of distillate collected? Collect distillate in the following solutions for the specified determinative method: plain boric acid solution for nesslerization; indicating boric acid solution for titrimetric method; 50 mL 0.04N H ₂ SO ₄ for manual phenate or electrode methods.	4500-N _{org} B.4.d				
Notes/Comments:					